U.S. Fish & Wildlife Service

Grizzly bear CPB User Guide & Example Conservation Measures - Idaho

Grizzly Bear

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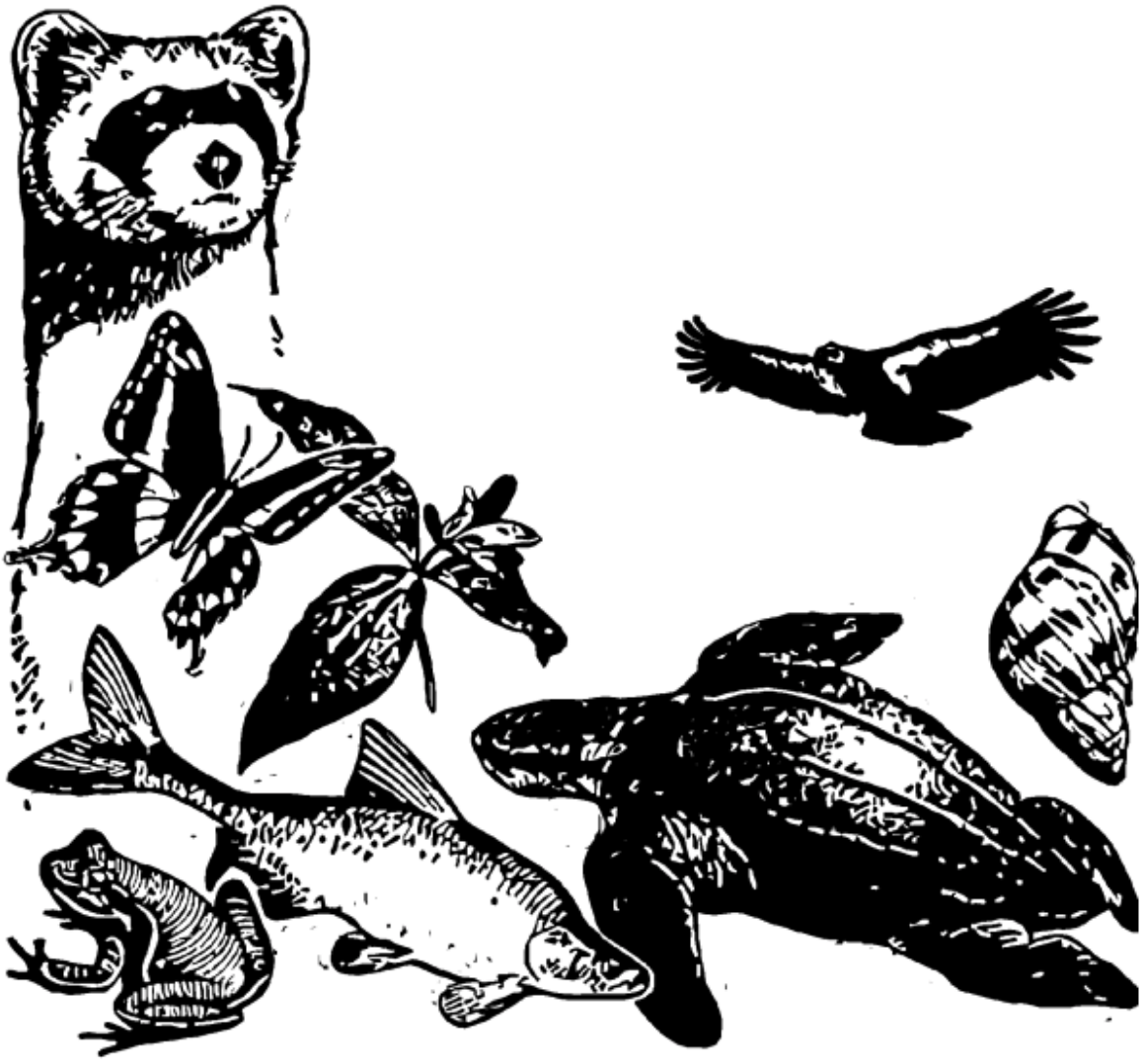

IPaC - Information for Planning and Consultation (https://ipac.ecosphere.fws.gov/): A project planning tool to help streamline the U.S. Fish and Wildlife Service environmental review process.

Consultation Package Builder User Guide – Grizzly Bear Consultations in Idaho
Prepared by the Idaho Fish and Wildlife Service Office
August 2023

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Document Purpose

The Information for Planning and Consultation website is a nationwide action planning tool that streamlines the U.S. Fish and Wildlife Service (Service) environmental review process. It can be accessed at: https://ipac.ecosphere.fws.gov/. Consultation Package Builder (CPB) is a new tool in Information for Planning and Consultation (IPaC) that provides an interactive, step-by-step process to help action agencies prepare a full consultation package (see Figure 1). This document follows the same organizational headings as the Idaho CPB User Guide (USFWS 2023, *entire*[1]). Use of the CPB tool is not required; whether or not the CPB tool is used, the Service recommends following these steps when writing a biological assessment (BA) or biological evaluation (BE) in Idaho. This format ensures consistency across the Service's consultations, and it enables a faster evaluation by the Service consultation biologists. *This document does not repeat general BA/BE detail for every CPB step again, instead it focuses on recommended grizzly bear considerations in each step.*

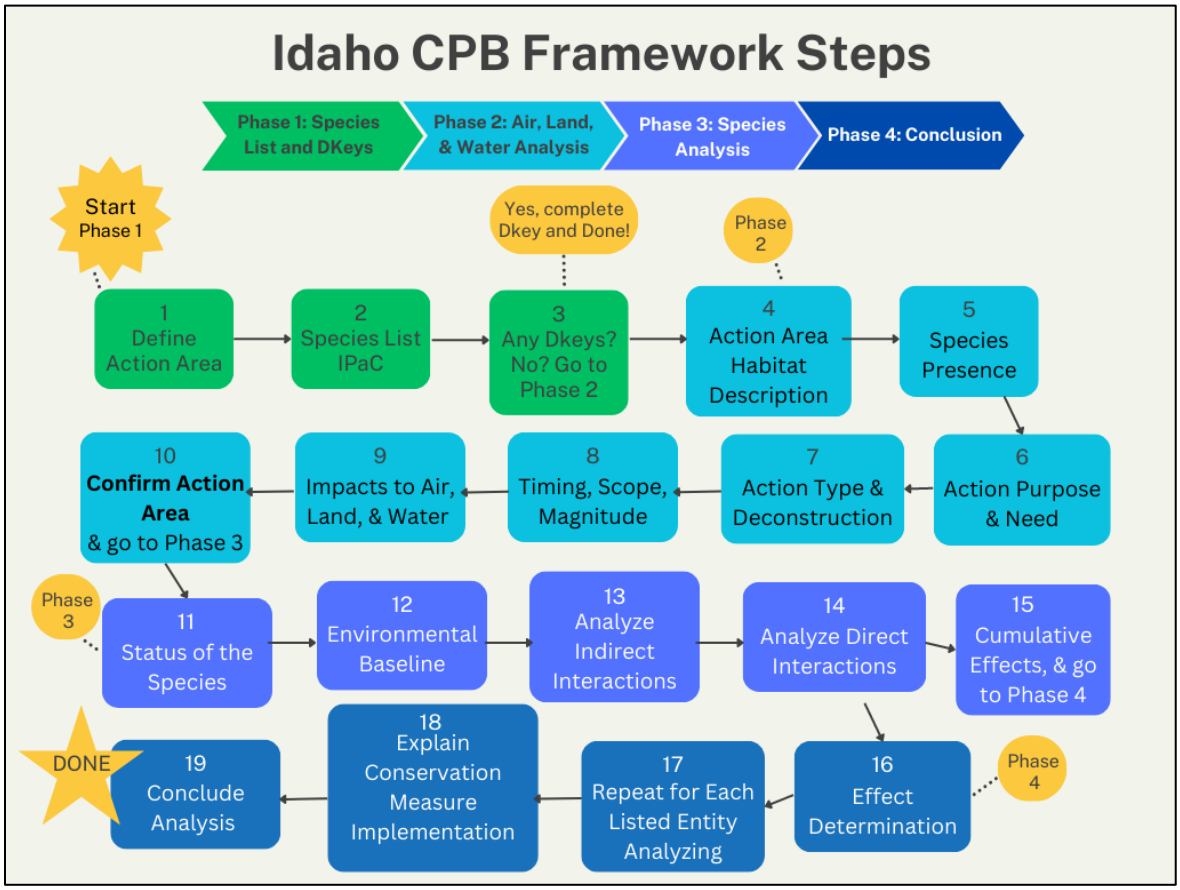

Figure 1. Steps for following the CPB framework within or outside of the online tool.

[1] U.S. Fish and Wildlife Service (USFWS), 2023. Idaho Consultation Package Builder Framework User Guide. Prepared by the Idaho Fish and Wildlife Service Office, August 2023. 15 pp.

Phase 1. Species List (IPaC), Programmatic Biological Opinions, and Determination Keys

This first phase of the CPB framework is to use IPaC to generate a species list and to check for any programmatic consultations or determination keys (Dkey) that may be available and relevant to your proposed action (see Figure 2). For steps 1-19, the Idaho CPB User Guide provides more information for each of these steps.

Step 1. Action Area

The action area includes all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 Code of Federal Regulation [CFR] 402.02). Some action agencies delineate grizzly bear analysis and/or management units. Although grizzly bear analysis/management units are useful for tracking baseline conditions, changes over time, and guiding grizzly bear management, they are not equivalent to the action area, which is where the proposed action is expected to modify the land, water, or air (see Figure 1).

Keeping the information described above in mind, grizzly bear management or analysis units sometimes may be included in whole within the action area, or the action area may only overlap a portion of the unit. For example, if an action agency's proposed activities in one area of a unit causes a change in the agency's management activities in another area of a unit (e.g., allowable open road access), those changes are design features and/or consequences of the proposed action that are reasonably certain to occur. Both areas would be considered part of the action area. Likewise, the action area may include areas outside management units for grizzly bears (i.e., is not limited to them). BA/BEs that refer to grizzly bear analysis or management units can become confusing for biologists delineating the action area and it is important to understand the distinction between the two. The Idaho CPB User Guide includes more detailed information to help with this distinction.

Step 2. Official Species List

In Idaho, the Service recommends requesting all official species lists using the IPaC system. Because grizzly bears are dispersing beyond their current range, any new information is uploaded to IPaC as soon as possible after it is received and verified. Grizzly bear dispersal activities demonstrate the importance of the requirement for the Federal agency to verify the accuracy of the species list every 90 days from the first date the action agency obtains a species list, if the action agency has not completed and submitted the BA/BE within the specified time period [CFR §402.12(e)].

Step 3. Programmatics & Determination Keys

Check with your local Service field office if there are any standing analyses[2] or programmatic consultations in effect that may be relevant to the proposed action and grizzly bears. To analyze your proposed action under an existing standing analysis or programmatic, the proposed action in your BA/BE must align with the design criteria, including any conservation measures, considered in the

[2] The standing analysis is a consultation tool designed to reduce the time necessary to complete consultation [including biological opinions] for a particular set of projects. It operates similarly to a programmatic or batched consultation, without dependence on a programmatic or batched biological assessment (BA) from an action agency to initiate the analysis.

programmatic or standing analysis. Design criteria should be described with enough detail to ensure consistency with the programmatic biological opinion or standing analysis. As of the writing of this document [August, 2023], the Stream Crossing Improvement programmatic (document number: 2022-0035034) is the only grizzly bear existing analysis available in IPaC as a semi-automated Dkey.

Phase 2. Air, Land, & Water Analysis

The second phase of the CPB framework involves deconstructing the proposed action's activities and structures, analyzing the impacts to the air, land, and water from those activities and structures, and confirming the action area (see Figure 4). You will complete the grizzly bear effects analysis in Phase 3.

Step 4. Habitat Description

Describe the habitat types present in the action area (e.g., coniferous forest, wetland and riparian areas, meadows, avalanche chutes, burned areas, logged areas, etc.), including habitat quality and distribution. This is the habitat in general, and it is not specific to grizzly bears. See the Idaho CPB Guide for more information.

Step 5. Species Presence

Determine the probable presence of a grizzly bear in the action area considering the entire duration of the effects from the proposed action to air, land, and water, including effects that are likely to occur later in time. The combination of effects occurring during the proposed action's implementation and those effects occurring later in time can be thought of as a "lifetime of action effects." Some grizzly bear questions and considerations may include: Could a grizzly bear be present at some time of the year in any part of the action area during the lifetime of action effects? How do grizzly bears use this area (e.g., dispersal, denning, feeding, and/or travel between habitat types)? Where is the action area relative to other occupied areas or areas where grizzly bears may be expanding (i.e., is it reasonable that expansion and dispersal from occupied areas could result in a grizzly bear using the action area at some point during the lifetime of action's effects).

Step 6. Purpose and Need

Explain the purpose and need for the proposed action, including a brief description of all proposed activities and structures and any authorities or program under which the proposed action is being developed (e.g., Healthy Forest Initiative). The physical structures such as roads should be discussed in relation to why they are necessary to accomplish the defined purpose and need.

Step 7. Action type and Deconstruction

Describe the proposed action type, associated activities, and associated structures. A menu of activities are available for selection in IPaC. An example of the selections that action agencies can make include:

Action Type: timber harvest,
Activities: road construction, yarding, etc., and
Structures: haul roads, staging areas, etc.

Describe the location of each activity and structure identified during the deconstruction.

Step 8. Timing, Scope, and Magnitude

Describe the timing, scope (size or extent), and magnitude (relative size or extent) of activities and associated potential stressors to air, land, or water (not species). Design features of the activity are important considerations in grizzly bear consultations, such as time of year and number of years. The Service recommends including the following in this section to support the grizzly bear analysis later: implementation and completion dates, phasing information, frequency and intensity of the activity, seasonal considerations, etc. This is not an exhaustive list of considerations for grizzly bear; include any other timing, scope, and magnitude considerations you think may be relevant.

Step 9. Impacts to Air, Land, & Water (Not Grizzly Bear)

Describe the potential impacts from each stressor (e.g., decrease in vegetation) to air, land, and water, including any design features or conservation measures that will completely avoid the stressor. Do not include potential impacts to the grizzly bear when describing the potential impacts from each stressor to the air, land, or water. All avoidance and minimization conservation measures that are part of the proposed action should be included when delineating the action area (including off-site conservation measures). If a stressor is completely avoided by a conservation measure, describe how the conservation measure avoids the stressor to the air, land, or water; this stressor will not be carried forward in the rest of the analysis, including grizzly bear analysis, because it has been completely avoided. Note that some grizzly bear-specific design features or conservation measures may minimize the effects to the air, land, or water as well as have benefits to grizzly bears. For example, conducting a timber harvest action in separate phases or ensuring sanitation practices are followed to reduce attractants, both minimize the effects to the environment and to grizzly bears. Specifics about how conservation measures minimize impacts to grizzly bears is described in Phase 3 (also see Appendix: Example Grizzly Bear Conservation Measures).

Step 10. Confirm Action Area

Considering the proposed structures, activities, and stressors to air, land, and water as well as the proposed conservation measures (i.e., everything related to the proposed action) **confirm** the final action area. Do not consider grizzly bear presence or use when confirming the action area.

Phase 3. Grizzly Bear Analysis

The third phase of CPB focuses on the direct and indirect interactions between grizzly bears and the impacted environment from the proposed action's deconstructed activities and structures (see Figure 5).

Step 11. Status of Grizzly Bear

Describe the following:

(a) legal status of the grizzly bear,
(b) recovery plan and relevant additions,
(c) grizzly bear life history,
(d) grizzly bear resource needs (the physical and biological features a grizzly bear depends on to fulfill its life cycle), and
(e) general conservation needs across the grizzly bear listed entity.

Any potential effects of fire and climate changes to grizzly bears should be discussed in this section as well. In CPB, (a) to (c) (i.e., the legal status, recovery plans, and life history sections) are automatically filled out for grizzly bears. In addition, (e) can be summarized from the grizzly bear recovery plan or the most current species status assessment available at: https://www.fws.gov/species/grizzly-bear-ursus-arctos-horribilis.

As of the writing of this document (August, 2023), resource needs (d) are not yet available for grizzly bear in CPB. Resource needs are features that are on the landscape (e.g., prey or forage), not the lack of specific attributes (e.g., noise or pollutants). Identifying the resources a species needs is a fundamental step in developing an impact analysis. The Idaho Fish and Wildlife Service Office (IFWO) has developed the following DRAFT example resource needs for this document that you can use in your BA/BE or manually enter in CPB. The draft example resource needs are based on the grizzly bear SSA; IFWO will update these resource needs as needed, and direct the user to the CPB system where the most current resource needs are available. The resource needs help provide context for the current status of grizzly bears in the action area and facilitate connecting the dots throughout the species effects analysis, including the reasoning behind grizzly bear-specific conservation measures.

Grizzly bear resource needs (manually enter in CPB):

(A) Prey – mammals, fish, insects, and worms

1) Search for prey and select as a resource need.
2) Select the life stages that require prey: juveniles, sub-adults, adults, and young-of-the-year.
3) Write in the text box the physical attributes of 'prey'. For example, "Abundant fish, including spawning cutthroat trout, abundant clusters of insects and worms, including ants and army cutworm moths, and/or abundant living or dead mammals, including elk."
4) Write in the text box why grizzly bears need prey. For example, 'Grizzly bears need prey for feeding and reproductive success. Grizzly bears will consume almost any food available including the following: living or dead mammals or fish, insects, worms, plants, human-related foods, and garbage (USFWS 2022, pp. 47-48). Food resources are especially important during the period leading up to hibernation when grizzly bears must consume energetically rich foods to build up fat reserves to survive denning and post-denning periods. Grizzly bears also need sufficient fat reserves to produce cubs.

   Grizzly bears throughout the range may consume ungulates as winter-killed carrion in the early spring, kill calves opportunistically, consume hunter-killed carcasses or gut piles, and prey upon adults weakened during the fall breeding season (USFWS 2022, p. 185). In the Greater Yellowstone Ecosystem (GYE), elk has been explicitly identified as a key prey resource.

   Army cutworm moths have been explicitly identified as a key food resource in the GYE in mid- to late summer (USFWS 2022, p. 186). They also are consumed in the NCDE as well as ladybird beetles (USFWS 2022, p. 193). Ants are an important food resource in the summer in the NCDE and SCYE, and after fire (USFWS 2022, pp. 193, 195, 203).

Grizzly bears will consume living or dead fish where available (USFWS 2022, p. 48). Spawning cutthroat trout are a key food resource explicitly identified in the GYE – numbers have declined, but they still provide a supplemental food source. Individual bears in the GYE may consume 8 to 55 trout each year (USFWS 2022, p. 186).'

(B) Vegetation – forage and vegetation cover

1) Search for 'Vegetation' and select it as a resource need.
2) Select the life stages that require vegetation: juveniles, sub-adults, adults, and young-of-the-year.
3) Write in the text box the physical attributes of 'vegetation'. For example,

   'Forage types include berry producing plants and seeds, including those of whitebark pine, grasses, roots, bulbs, tubers, and fungi.

   Shelter types include horizontal and vertical vegetative cover dense and large enough for concealment, shade, and resting (e.g., trees, large shrubs).'

4) Write in the text box why grizzly bears need vegetation. For example, in the GYE you could include 'Grizzly bears need high-caloric forage vegetation for feeding and reproductive success (see prey resource need). Whitebark pine seeds are a key food resource identified in the GYE (USFWS 2022, pp. 186-192).' In the Selkirk, Cabinet-Yaak, or Bitterroot Ecosystems you could include information such as, 'Grizzly bears eat a variety of plants throughout their range and berries can be very important in late summer and early fall when bears need fat reserves for denning and reproduction (USFWS 2022, p. 48).'

   All ecosystems should also include information about why grizzly bears need vegetation for cover and shelter. Wording could include, 'Grizzly bears also use a variety of vegetation cover types to rest and shelter (USFWS 2022, p. 47). Grizzly bears often select bed sites with horizontal and vertical cover, especially at day bed sites, suggesting that bed site selection is important for concealment from humans. In one study, most grizzly bears were unable to be located by aerial telemetry due to their high preference for dense forest. Beds underneath any type of vegetative cover provide bears shade during the hottest parts of the day and a place to sleep at night. Cover may include forests, riparian areas, or other vegetative sources (USFWS 2022, p. 99).'

(C) Dens - dens and non-vegetation cover

1) Type in 'Dens' and select as a resource need.
2) Select the life stages that require 'dens': juveniles, sub-adults, adults, and young-of-the-year.
3) Write in the text box the physical attributes of 'dens'. For example,

   'Dens: 4,500 to 8,000 feet elevation. Location: In or adjacent to foraging habitat. Time of Year: Winter. Type: Caves, among rocks, or stabilized, but diggable ground under thickets, uprooted trees, or under riverbanks. Spatial arrangement: 30 to 60 degree slopes, deep

snow. Hard shelter: Overhanging rock or caves large enough for concealment or shade during the non-denning season.'

4) Write in the text box why grizzly bears need 'dens' and hard shelter.

For example, 'Grizzly bears need dens for shelter during hibernation and adult female grizzly bears need dens for parturition. Grizzly bears hibernate in winter to cope with seasons of low food abundance (USFWS 2022, pp. 45-46). Grizzly bears usually dig winter dens on steep slopes where wind and topography cause an accumulation of deep snow and where the snow is unlikely to melt during warm periods. Grizzly bears in the lower-48 States hibernate in dens for four to six months each year, typically entering dens between October and December. Females give birth to cubs in the den in late January to early February. On average, males exit dens from early March to late April. Females typically emerge from their dens from mid-March to mid-May and females with cubs emerge from mid-April to late-May.

Grizzly bears need cover throughout the non-denning season for concealment, shade, and resting. Cover may include any type of structural sources (USFWS 2022, p. 99), including rock overhangs or caves.'

Step 12. Environmental Baseline

Describe the condition of grizzly bears and their resource needs in the action area, without the effects of the proposed action, which are contemporaneous with the proposed action. Include the following:

(a) grizzly bear presence and use of the action area,
(b) grizzly bear conservation needs for survival and recovery specifically within the action area,
(c) the general condition of grizzly bear habitat (refer to resource needs described in Step 11),
(d) any influences that might be contributing to the current environmental baseline of grizzly bear (including prior consulted on effects),
(e) grizzly bear ability to travel through or use the action area to access surrounding effective habitat (as defined in the following paragraphs) and,
(e) any other additional baseline information.

Describe the action area relative to the following: grizzly bear recovery zones, bear management or analysis units, and bears outside recovery zones, if applicable. Include context that describes secure habitat and connectivity/dispersal needs. Grizzly bear home ranges are large and vary among the ecosystems from 50 square miles in the GYE to 732 square miles in the CYE due to population densities, sex, age, reproductive status, and resource availability (see annual reports from each ecosystem for the most current home range estimates). These large home ranges mean that often action areas only include a portion of an individual/s home ranges. Discussion about connectivity and dispersal needs in the action area may require considerations of habitat conditions outside the action area in the effects of the action section; for example it may be helpful to describe if the conditions of the current environment are deterring grizzly bear movement into a housing development area versus if baseline conditions are deterring movement into a recovery zone. Secure habitat is described as areas where grizzly bears can meet most of their life history needs without the heightened mortality risk or negative consequences of human disturbances. Habitat is generally considered secure if there is a low potential

or levels of human disturbance during the non-denning season and the area is more than 0.31 mile (500 meters) from human structures and motorized roads. Grizzly bears occupy a variety of habitats and landownerships across a large range. Their habitat security needs vary in these different areas and may be different for resident vs. dispersing bears. Work with your local Service field office to discuss ecosystem-specific secure habitat considerations. Because “core” or “secure core” habitat is used to describe secure habitat within recovery zones, we use the term secure habitat in this document, and we consider it inclusive of core/secure core. Do make sure to discuss core habitat if relevant to your proposed action.

Describe habitat in the action area that may be available to grizzly bears, including *effective* habitat conditions, ongoing positive or negative impacts, and any influences on movement and dispersal. Effective habitat conditions include considerations of resource conditions and secure habitat within an individual’s home range. Access to large intact blocks of habitat that include sufficient cover, forage, and prey (i.e., resource needs) in secure areas are important considerations in grizzly bear consultations; access to large intact blocks may include maintaining access to areas outside the action area and within an individual grizzly bear home range. The Idaho field office recommends including vegetation types, percent cover and/or forage, habitat quality (if known), and secure habitat patch sizes and distribution. This is not an exhaustive list, include any other habitat descriptions considerations you think may be relevant. If appropriate, upload surveys or assessments related to this information.

Consider and discuss the spatial arrangement of motorized and unmotorized routes, the use intensity and frequency on these routes, and how this context relates to grizzly bear density and dispersal and movement (i.e., where have grizzly bear use and movements been documented in the action area and in relation to the current routes). Describe the condition of human access in the area. In the description, include any known human-grizzly bear conflicts in or near the action area.

Make sure to consider:

(1) secure habitat,
(2) mortality risks and history,
(3) dispersal and connectivity,
(4) vegetation (for (a) forage and (b) cover),
(5) prey, and
(6) denning habitat (including access to nearby spring habitat).

Include any other information you think may be relevant.

Step 13. Analyze Indirect Interactions

Indirect interactions consider action-related impacts to resource needs of a species that indirectly affect individuals of a species.[3] Identify which grizzly bear resource needs are present in the action area and explain your rationale if you determine a resource is not present. Make sure that you consider the subcategories within each resource need (e.g., resource need: vegetation and with subcategories: forage and cover). Use the Species Status Assessment and any monitoring or habitat reports to assist

[3] The reference in CPB to direct and indirect interactions (effects to individuals) is not the same as direct and indirect impacts to the environment referred to in the action area definition. In CPB, the analysis is focused on direct interactions with individuals and indirect interactions with individuals via habitat impacts..

with this section. The table in CPB will look like Table 1 below, and it would be helpful to replicate this table in a standard BA/BE.

Table 1. Example resource need interactions table provided in CPB with potential grizzly bear chain of effects.

RESOURCE NEED	STRESSORS*	CONSERVATION MEASURES	AMOUNT OF RESOURCE IMPACTED	INDIVIDUALS IMPACTED (exposed to stressor)
e.g., Vegetation – forage	Decrease in vegetation used for forage	Phased activity allowing forage to remain in adjacent habitat	50 acres	Estimated individuals exposed to reduced forage *or* surrogate – effective habitat

*Stressors in this section are indirect (i.e., impact resource needs). Direct impacts to grizzly bears will be addressed later.

Describe the distribution, location, quantity, and quality of each grizzly bear resource need that is present. What sex and age is/are the grizzly bears that are likely to use the action area? Are secure habitat patches sufficient for more than transient use? Calculate or estimate how many grizzly bears may be exposed to the stressor on the resource based on local data. If it is impractical to express this in terms of individuals, a surrogate may be used. Describe why a surrogate is necessary, as well as its causal and quantitative links to individuals of the species that could be exposed to the stressor. For example, if you cannot estimate the number, describe the density of grizzly bears relative to other areas or any other information you can provide. Consider where the action area is relative to grizzly bear recovery zones or population concentrations.

Include any conservation measures to avoid or minimize impacts to the grizzly bear resource need and the: size, scope, magnitude, and location of remaining impacts. The Appendix to this User Guide, *Example Grizzly Bear Conservation Measures*, includes a comprehensive but not exhaustive list of general and action-specific grizzly bear conservation measures that have been included in previous consultations and may be relevant and implementable for the action. Discuss effects from the proposed action's activities and structures to the grizzly bear resource needs identified above. Consider different effects to female grizzly bear resource needs. Keep in mind that grizzly bears have three life stages: dependent young, subadults, and adults. Cubs are born inside the den in late January or early February and remain with their mother for two to three years. The age at which females produce their first litter varies from three to eight years, with litter size varying from one to four cubs. The time it takes for a female to replace herself in the population with another breeding female may be eight to ten years, assuming a 1:1 litter sex ratio.

Using cover/vegetation as an example, reduced vegetative cover could lead to reduced foraging efficiency, reduced fitness, and, ultimately, reduced reproductive success (i.e., failed implantation or gestation or smaller litters). Consider that areas with lower grizzly bear densities may have less likelihood of resulting in significant effects. In addition, reduced cover may result in immeasurable effects if grizzly bears have access to available nearby cover. Describe any nearby cover and how grizzly bears can access it or any other relevant considerations. Make sure to include any: phasing, buffers, adjacent suitable cover, or other design features or conservation measures that would minimize effects to cover. Think about which of the proposed action's activities or structures may affect cover.

Step 14. Analyze Direct Interactions

Identify the direct interactions to grizzly bear individuals that may occur (e.g., deters movement, disturbance, collisions, etc.). Analyze each direct impact by describing any conservation measures the action agency will include (see Appendix for a list of example conservation measures). After describing the conservation measures, determine how many individuals (or surrogate amount) could be exposed to that direct impact. The table in CPB will look like Table 2 below. It would be helpful to replicate this table in a standard BA/BE if not using the CPB tool.

Table 2. Example grizzly bear direct interactions table provided in CPB.

DIRECT IMPACT	CONSERVATION MEASURES	INDIVIDUALS IMPACTED (exposed to stressor)	IMPACT EXPLANATION
e.g., Disturbance	Phased activity allowing secure conditions in adjacent habitat	Estimated individuals exposed to disturbance or surrogate, XXXX acres total, XXXX acres in phase 1, and XXXX acres in phase 2, etc.	Disturbance can cause grizzly bears to startle and/or flee a preferred habitat area, etc. Long-term displacement (under-use or avoidance) from preferred habitat could lead to reproductive failure for female grizzly bears or movement and dispersal barriers.
e.g., Conflict	Action-specific sanitation orders	Surrogate, XXX acres total	Increased human presence and attractants may increase the possibility of human-bear conflict.

Consider direct interactions that could result in: vehicle collisions, human-grizzly bear conflict scenarios, startle/stress responses, auditory disturbance, visual disturbance, deterring habitat use or movement. Any of these could lead to reduced fitness, reproductive failure, or survival, depending on the frequency, intensity, and duration of the interactions. Displacement is used in general terms to describe “under-use” of preferred habitat. Displacement also may describe “avoidance” of an area, but it does not necessarily mean that grizzly bears would totally avoid an area, nor be excluded in some way from ever using an area. Consider effects of displacement to female bears vs. male bears. For example if analyzing female bears, increased stress could lead to reduced fitness, which could reduce reproductive success such as: litter size, implantation, or successful gestation. Discussion on displacement should include sizes and spatial arrangements of effective habitat patches – areas where grizzly bears can be free of direct impacts from noise and human access and have access to sufficient resource needs. Make sure to include the following: frequency and duration of disturbances, any breaks in activity, seasonality of disturbances, timing, and any buffers.

Step 15. Cumulative Effects

Identify and provide information on any anticipated future state or private activities (not involving Federal activities/funding) that are reasonably certain to occur within the action area. Use the same process of describing impact-exposure-response-effect as you did in the effects of the action section for this proposed action (i.e., Steps 9 to 14). Describe effective habitat conditions on non-Federal lands within the action area with best available science and information, including how non-Federal actions on those lands might affect grizzly bear habitat use patterns or movement within and through the action

area. When writing the description, include any available information about attractants management and regulations on non-Federal lands in the action area. In the cumulative effects section, it is important to include known, relevant-to-grizzly bears information about private activities on non-Federal lands within the action area as well as explain any future reasonably certain to occur activities (e.g., future road plans or development on some non-Federal lands).

Phase 4. Conclusion

In Phase 4, the action agency wraps up the analysis by making the effect determination, discussing how conservation measures will be implemented, and concluding the analysis (see Figure 6).

Step 16. Effect Determination

Review the remaining indirect and direct interactions from the stressors associated with the proposed action's activities and structures to grizzly bear resource needs and individuals (or surrogate) and make your effect determination. (See Idaho CPB User Guide for more information on effect determinations). In CPB, you also will have the option to describe any 7(a)(1) or other measures that avoid, minimize, or offset the consequences of the action, if you would like to highlight efforts the action agency is implementing for the recovery of the species.

Step 17 & 18. Conservation Measures Implementation

Under Step 17 of the Idaho CPB User Guide the action agency conducts a Phase 3 analysis (Steps 11 through 16) for other listed entities. Step 18 asks the action agency to describe how they will implement any conservation measures, including design elements and design features, identified for grizzly bears. For example, phasing measures will minimize disturbance of grizzly bears and sanitation plans will minimize potential for conflict. If used, describe how the action agency will implement these conservation measures.

Step 19. Conclude analysis

Summarize the overall effects the proposed action will have on grizzly bears within the action area. Provide clear statements summarizing your analysis that will help the Service understand your findings. If using CPB, download the document from CPB. Submit your draft BA/BE to the Service by email: fw1idahoconsultationrequests@fws.gov. Please note that you can add Service biologists to CPB at any step in the process to assist with development of the draft BA/BE, if desired. We recommend that you discuss their workload capacity with your local Service office prior to adding anyone to a proposed action in CPB. Similar to a regular consultation process, the biologist reviewing your draft BA/BE may have follow-up questions or requests of additional information for the submitted draft BA/BE. Adding the Service to the document in CPB is intended to help reduce additional information requests.

Appendix: Example Grizzly Bear Conservation Measures

This Appendix contains a list of recommended conservation measures for grizzly bears grouped by activity type. This list is provided upon request or when an official species list is received from IPaC/the Service that includes grizzly bear as potentially present. Conservation measures are optional techniques or activities that can be utilized by action agencies or action proponents when developing their proposed actions to proactively avoid or minimize impacts from action activities. While this list contains conservation measure suggestions, it should be noted that this list is not exhaustive and the Service does not require the adoption of these measures. Conservation measures should be selected as appropriate and implementable for each proposed action. Although these conservation measures may help avoid or minimize impacts from certain activities, activities or structures may still result in adverse effects on grizzly bears. This is a living document and we will update it with new science and information, as needed.

Season of use influences grizzly bear impact analyses and seasonality can be used to help consider appropriate conservation measures.

Table 1. Grizzly bear activity seasons by ecosystems in Idaho

Ecosystem	Spring season	Non-denning season	Fall season	Denning season
Cabinet-Yaak	April 1 – June 15	April 1 – Nov. 30	Sept. 16 – Nov. 30	Dec. 1 – March 31
Selkirk	April 1 – June 15	April 1 – Nov. 15	Sept. 16 – Nov. 15	Nov. 16 – March 31
Greater Yellowstone	March 1 – July 15	March 1 – Nov. 30	Sept. 1 – Nov. 30	Dec. 1 – Feb. 28/29

Example Bear Safety Conservation Measures

- Activities will adhere to all grizzly bear-related requirements in Forest Service plans or other relevant land and resource management plans. This includes consistency with any bear safety plans relevant to the action area.
- Duration of activities will be limited and activities will be phased. Areas free of disturbance will be part of the proposed action's design – for example, for a large-scale action, schedule impacts such as major equipment operations in one drainage or bear management/analysis unit at a time.
- Anyone working in grizzly bear habitat (i.e., contractors, partners, and Federal employees) will be briefed on bear-country safety. This will include bear spray training, securing attractants, and minimizing potential for conflicts and disturbance to bears. Doors and windows will be kept closed, especially when a building or vehicle is unoccupied.
- Anyone working in grizzly bear habitat (e.g., contractors, permittees, volunteers, and Federal employees) will comply with applicable attractant storage regulations or orders available at: http://igbconline.org/food-storage/. The Interagency Grizzly Bear

Committee (IGBC) website includes an interactive map to identify applicable food storage regulations in grizzly bear habitat and a list of regulations on Federal, Tribal, and state lands for each state. If no specific rule exists for the action area, adaptation of the available food storage regulations on the IGBC website or any orders on adjacent lands can be used instead.

- The action agency will communicate with adjacent landowners and stakeholders regarding bear awareness to reduce human-bear conflict. This includes communicating with adjacent landowners if a sign(s) of grizzly bears is discovered.
- Infrastructure will be included to minimize human-bear conflict such as temporary or permanent fencing, notification system, etc. The action agency will ensure trash and food are secured in bear resistant trash cans, lockers, dumpsters, etc.
- The action agency will notify the Service's Grizzly Bear Recovery Program if any grizzly bear/human conflicts occur or if they encounter any active dens, tracks, or other evidence of grizzly bear occurrence within 24 hours of the bear/human conflict. For conflict reports, contact the grizzly bear conflict coordinator at (406) 214-0497 or benjamin_jimenez@fws.gov. For sightings and observation data, contact hilary_cooley@fws.gov
- If grizzly bears are observed within the action area during the spring season (see Table 1), an implementation plan will be developed specific to that area to minimize disturbance to grizzly bears during the spring.
- A provision will be included providing for modification, cancellation, suspension, or temporary cessation of activities to resolve grizzly bear-human conflict situations, if needed.

Example General Conservation Measures

- Grizzly bears use a variety of cover types to rest, shelter, and hide throughout their home range. If activities remove cover, the proposed design also will ensure bears have access to interspersed cover areas. The amount and location of cover needed in an area varies topographically. This will need to be discussed on an action-by-action basis. The intent is that enough visual cover remains such that bears startled by activities can quickly escape to sufficient nearby hiding cover. Some action design features and conservation measures in previous documents have included:
  - Vegetation management actions will be designed to support diverse habitat complexes, such as forest interspersed with moist grass-forb meadows, that provide both abundant food and cover for grizzly bears.
  - Within areas actively used by grizzly bears, no-cut buffers (minimum of 25 feet) will be applied in riparian zones to provide vegetative screening along streams and wetlands. No new openings will be created in riparian zones where the distance to cover would exceed 350 feet.

- Riparian and remnant forest stands within harvest units will continue to provide good opportunities for cover in between vegetation treatments that improve forage potential. Interspersed visual cover also will be maintained adjacent to open roads and major habitat components, such as snow chutes and riparian shrub fields (mixed shrub fields often contain many species of berries), or mixed shrub fields created by fires, avalanches, or timber harvest.
    - Generally, interspersed pockets of visual hiding cover will be thick enough to hide 90 percent of a bear at 200 feet.
- Screening cover mainly will be comprised of leave clumps strategically placed in harvest units, but it could include topographic features (steep slopes, draws, small prominences, or roadside cut slopes), advanced regeneration or shrub cover, and roadside leave strips.
- In areas along roads or areas with heavy human use (e.g., campgrounds, trailheads, picnic areas, etc.), restoration efforts will avoid seeding or planting species with potential to attract grizzly bears, such as clovers or legumes.
- Prescribed burning will be implemented in the fall rather than the spring (see Table 1).
- Camping and associated activities will occur at developed campgrounds, or, if at dispersed sites, will consist of ≤ 20 individuals for up to 5 days/campsite.

Example Denning and Post-Denning Conservation Measures

- Activities generating noise above ambient levels will not occur within 0.25 mile (and 1.0 mile for pile driving) of known grizzly bear den sites during the denning season and den emergence/spring season. Denning information is based on current information from state wildlife agencies and the Service. Grizzly bears typically den in areas at elevations equal to or greater than 4,000 feet (1,219 meters) with the vast majority of dens above 5,000 feet (1,524 meters).
- All activities will avoid high-quality spring habitats during the spring season (see Table 1). This includes replacement and improvement activities on culverts, trails, and trailheads in spring habitat areas. High-quality spring habitat areas are defined as snow-free forested and open habitats that afford fresh green-up of grasses, roots, and bulbs as well as foraging opportunities for small rodents, and they may include riparian areas, meadows and open grassy parklands, and avalanche chutes.
- If it is not feasible to avoid high-quality spring habitat areas during the spring season (see Table 1), actions will be completed in five or fewer days. No off-road activities will take place in the spring season.

Example Secure Habitat Conservation Measures – Although the secure habitat conservation measures may help avoid or minimize impacts from certain activities, proposed actions still may result in adverse effects on grizzly bears.

- No motorized activity (including aircraft) will occur in grizzly bear secure habitat during the grizzly bear non-denning season (see Table 1).
- During the non-denning season (see Table 1), motorized activities on Forest Service lands only will occur on roads shown as open on the Motor Vehicle Use Map. On non-Forest Service lands, motorized activities only will occur on roads that do not affect secure habitat baseline.
- Actions will not result in increased motorized or non-motorized access in secure habitat, as assessed by an action agency wildlife biologist.
- Implementation of activities in secure habitat (e.g., temporary roads) will be avoided. If activities cannot be avoided, the action agency will work with the local Service office to identify minimization measures that reduce the potential of multiple grizzly bear generations being disturbed or displaced. This is particularly relevant if female grizzly bears could occur in the action area.
- Activity in grizzly bear secure habitat for culvert upgrades will occur in a single year and will not exceed 30 days (include dates and seasons).
- Timber harvest, log hauling, and temporary road construction in grizzly bear secure habitat will be allowed only during the denning period (see Table 1).
- Road activities in secure habitat on Forest Service lands only will occur on roads shown as open on the Motor Vehicle Use Map.
- Motorized access (on bermed roads or cross country) that is further than 0.31 mile (500 meters) from any open route (i.e., route that already detracts from secure habitat) will not occur.
- Activities or structures will be avoided within 0.31 mile (500 meters) of meadows and riparian areas. If activities cannot be avoided, the action agency will work with the local Service office to identify minimization measures that reduce the potential of multiple grizzly bear generations being disturbed or displaced.
- In areas that have existing wheeled motorized access conditions that are resulting in ongoing negative impacts for grizzly bears, motorized use will occur only during daylight hours and no motorized access for activities (e.g., aquatic activities) will occur further than 300 feet from any open road.

Example Road Closure Conservation Measures

- Motorized public access will remain restricted on closed roads on National Forest System lands during administrative use (use authorized by the agency). If berms, barriers, etc. are removed to access treatment units, the purchaser will install temporary gates or effective barriers and berms will be reinstalled once activities are complete.
- When utilizing a restricted road with a closed gate, ensure that the gate remains closed and locked while activities occur, at the end of the day, and after each vehicle

passes. All newly constructed roads (temporary or permanent) will be closed by barrier or gate to public motorized use during and after road building and other activities. All existing roads currently closed to public motorized use will remain closed to such use during implementation of all proposed activities.

- Currently unclassified and undrivable roads within the action area that are added to the system, reconstructed for timber hauling, and/or subsequently placed into storage will be effectively gated and closed to public use during implementation.
- Logging debris will be scattered across closed routes at a location further up from the original gate or closure as an additional barrier to vehicles.

Example Decommissioning and Restoration Conservation Measures

- After completion of the action, secure habitat will be restored to the pre-existing level condition before grizzly bear emergence the following spring. This includes decommissioning, obliteration/rehabilitation of temporary roads, and returning restricted roads used as haul routes to administrative access only.
- All roads that will be placed in Intermittent Stored Service/stored for future use will be made impassable to motorized vehicles. This will include treatment so that the road is blocked and there is little resource risk if road maintenance is not performed on a regular basis.
- All temporary roads and areas constructed and used for activities may include the following rehabilitation activities:
  - The entire road template will be recontoured to natural ground contour.
    - Routes will be recontoured for one sight distance from the beginning of the route and a permanent closure structure will be put in place to eliminate the unauthorized, motorized use of the route. Exceptions may be made to accommodate the following: prescribed burning, best management practices to protect water quality, required reforestation activities, and emergency situations.
- Installed culverts, drainage structures, or temporary bridges will be removed and water bars will be installed.
- Disturbed soil will be inoculated (soil inoculum) and seeded or planted with a native plant mix, as specified by a qualified botanist.
- Woody material will be placed across the road template to block the route and allow revegetation according to best management practices.
- Rehabilitation effectiveness will be monitored and adaptive changes implemented to ensure the route remains impassable and undetectable.

Example Unauthorized Vehicle Use Conservation Measures

- Routes will be closed in a manner that discourages future unauthorized off-road and off-trail motorized use (e.g., clear signage, scattered slash and down-woody material, adding rocks or other barriers, or recontouring).
- Routes will be frequently monitored and any unauthorized use will be reported to the land manager.
- In areas where there is evidence that unauthorized off-road vehicle use has occurred, measures will be taken before the next bear year (emergence from dens) to prevent this use from re-occurring. This may include placing large logs, rocks, or other debris at strategic points and locating or designing skid trails and temporary roads in such a way that discourages potential off-road vehicle use.
- Newly constructed firelines will be located away from public access points to prevent their use as unauthorized motorized travel routes. Where a fireline must be constructed near public access points, the fireline will be treated in a manner to make inaccessible to unauthorized motorized vehicles during the non-denning season (see Table 1).

Example Wildfire Conservation Measures

- Best management practices will be followed for wildfire response (e.g., washing all vehicles and inspecting clothes to avoid noxious weed introduction).
- As much as possible, camps will not be located in or adjacent to grizzly bear habitat. If camps must be located in or adjacent to grizzly bear habitat, they will be inspected daily to make sure food and garbage are unavailable to bears during and after site occupation. Main and spike camps will be located well away from visual cover that may allow bears to approach undetected. This includes areas near riparian sources and bear food sources (berry bushes, etc.). Garbage will be removed from spike camps daily.
- Proper food and garbage storage, such as bear-proof containers, electric fence, and/or poles, will be used at all spike camps that are in or adjacent to grizzly bear habitat. Cooking areas will be staged at least 100 yards from sleeping areas.
- Bear safety and awareness messaging will be provided daily at morning briefings and when plans shift.
- Bear spray, bear spray training, and bear-resistant attractant storage canisters will be provided to all personnel.
- Bear safety information will be posted in visible locations throughout the camps.
- Commercial portable toilet facilities will be used, if possible. If not, all fecal matter will be buried at least 6 to 8 inches deep, well away from sleeping areas. Toiletries will be stored away from sleeping areas.

- To the maximum extent practicable, wildfire responses will avoid constructing new roads or permanent and temporary travel ways. Any new routes constructed will be closed and rehabilitated, including machine built firelines, so that they are inaccessible to motorized vehicles.
- To the maximum extent practicable, wildfire responses will avoid opening gated or bermed roads. If it is necessary to open these roads, the road should be closed as soon as possible upon completion of suppression activities.
- Post-fire restoration activities will avoid seeding and planting with palatable forage species in areas near human development. Palatable species vary by location and local conditions, but generally they include clovers (Trifolium spp.), fruits, and succulents.
- The Service's Grizzly Bear Recovery Program at (406) 243-4903 will be notified of any grizzly bear sign or grizzly-human conflicts within 24 hours from the event.
- On-the-ground managers will review any relevant guidance documents for protecting grizzly bears during wildfire in the action area. Managers will ensure feedback on effectiveness of minimization measures are discussed with the local Service office and they will apply any changes to the conservation measures, if needed.

Example Aircraft Conservation Measures

- Manned aircraft
  - Helicopter logging and associated hauling in grizzly bear secure habitat will be allowed only during the denning season (see Table 1). Logs will be decked on landings outside of secure habitat.
  - Manned aircraft flights below 0.31 mile (500 meters) in altitude will not occur over areas where grizzly bears could reasonably occur and be active during the flights (see Table 1).
    - If a low-level flight or landing is needed and a grizzly bear is seen, the flight will be postponed.
    - Landings will not occur within 0.31 mile (500 meters) of a grizzly bear.
  - Manned aircraft access within a female grizzly bear home range will be short in duration (activity will conclude within a 48-hour period).
  - The action agency has communicated with other agencies and private companies including Federal, state, Tribe, and private entities, to coordinate avoiding or minimizing other manned aircraft activities from Federal, state, Tribe, or private companies within a 30-day period within the same female grizzly bear home range.
  - Manned aircraft flights will be scheduled between one hour after sunrise to one hour before sunset during the active bear year (see Table 1).
  - Flight paths will be less than ½-mile in width and directed along existing open or restricted roads or ridgelines to the extent feasible.

  - Wherever feasible, flight paths will be directed outside seasonally important habitats for grizzly bears, unless they can be limited to the seasons when grizzly bears are not expected in these habitats. For example, flight paths during the active bear year (see Table 1) will avoid open alpine meadows, talus slopes, or other areas where grizzly bears congregate, especially open areas where bears do not have access to cover.
  - Aircraft use for prescribed burning will be limited to 12 days total in 1 bear year and no more than 2 days per individual season (fall or spring, see Table 1).

- Unmanned aircraft systems (UAS), also known as drones, will implement a 200-feet elevational buffer and stay 200 feet horizontally from any grizzly bears spotted.
  - The quietest UAS available that can accomplish the mission will be used with a maximum sound output of 90 decibels; only battery powered UAS will be used.
  - Flight operator must always maintain line of sight with UAS during flight mission.
  - Prior to launching the UAS, the pilot will scan the action area for federally protected species.
  - UAS flights will be planned to avoid impacts by optimizing the route, speed, timing, and frequency of flights as well as employ technologies and techniques that help avoid impacts.
  - The UAS will be operated in a manner that minimizes audible and visual impacts to wildlife, and wildlife will not be harassed. If wildlife or other resources are encountered during the mission that may be affected by the UAS, the mission will be aborted or there will be a modification to the route, altitude, airspeed, or other operating parameters to minimize potential impacts without compromising the safety of the mission, if possible.
  - The proposed operation plans will be approved by the qualified wildlife biologist prior to any UAS use. To limit the intensity of use, only one permit will be issued at a time for a single area.

Example Special Use Permit Conservation Measures

  - The permit holder and all other participants will be permitted to only travel on the routes that are specifically listed in the permit while carrying out permitted activities.
  - Motorized travel, including E-Bikes and E-Dirt Bikes, only will be allowed on roads or trails on dates when each route is open to public motorized access. The permit holder will be responsible for providing road and trail closure information to all tour guides.
  - The permit holder will be responsible for reporting to the action agency any gates found to be damaged, improperly managed, or unauthorized motorized use that they encounter.

Example Grazing Conservation Measures

- The Forest Service will provide bear safety education, including awareness, prevention, and reporting, to livestock grazing permittees and their employees. Herders will be instructed on how to minimize the chances of an encounter with grizzly bears. For example, moving sheep to other areas of a pasture may help avoid an immediate threat, and moving sheep to other pastures/locations may need to occur if encounters persist. During the Annual Operating Instruction meetings with the permittees, conservation measures will be discussed.
- Any grizzly bear sightings will be reported to the action agency as soon as possible. All grazing permits include a clause providing for adaptive management strategies (e.g., grazing management options) to resolve a grizzly bear/human conflict situation, if needed. Permittees' full cooperation in meeting grizzly management goals and objectives will be a condition of receiving and holding permits.
- Inside of the GYE Recovery Zone, no new active permitted grazing allotments will be created beyond the identified 1998 baseline described in the 2007 Conservation Strategy (USFWS 2007, p. 43). Numbers of permitted livestock grazing allotments and numbers of Animal Unit Months within the recovery zone will be annually monitored and reported to the Interagency Grizzly Bear Study Team by the action agency.
- In grizzly bear habitat, allotment management plans will specify feasible measures to protect, in time and space, food production areas important to grizzly bears (i.e., wet alpine and subalpine meadows, stream bottoms, aspen groves, and other riparian areas) from conflicting and competing use by domestic livestock. These measures will be reflected in grazing permits. Degrees of protection could range from partial to full protection as indicated by the action agency’s evaluation. Measures could include, but are not limited to, the following: closing grazing units either temporarily or permanently, exclusion fencing, changing on and off dates, and setting livestock utilization rates at levels compatible with grizzly bear needs.
- Sheepherders, working dogs, and guard dogs will be kept with sheep full-time when on rangelands to reduce the likelihood of grizzly bear encounters, and to assist in efficient and prompt movement of animals when necessary.
- Allotment management plans will specify measures for the timely removal, destruction, or treatment of livestock carcasses to avoid positive conditioning of grizzly bear to livestock carrion as food (e.g., all carcasses will be removed from the Federal lands if within 0.5 mile of designated roads or developments). Herders and riders will be required to closely watch livestock for sick, injured, or stray animals. The intent is to reduce the likelihood of food association with domestic herds and reduce opportunities for depredation.
- Additionally, all dead livestock posing a health or human safety hazard will be removed when the area is deemed safe for entry and removal. Reasonable efforts will be made to remove dead livestock within 0.25 mile of: live streams, springs, lakes, water,

riparian areas, system roads and trails, developed recreation areas, dispersed camping and picnic areas. When it is not reasonable to remove dead livestock due to human safety concerns, permittees promptly will report carcass locations to the action agency. The action agency, working with the permittee, will jointly determine the appropriate action.

- Where food storage is required, unnatural attractants to bears will be minimized. This includes treatment or removal of livestock carcasses and proper storage of human foods, garbage, and dog food. The IGBC approved bear-resistant containers that are required and damaged containers will be repaired or replaced so that they work as designed. Where required, all people involved with grazing on allotments must comply with food storage, which will prevent the availability of human-related food sources or attractants for grizzly bears.
- Camp tenders and managers will make periodic visits (approximately every three days) to remove trash and dead animal carcasses to eliminate potential bear attractants. In some locations, it is not feasible to remove carcasses (due to degree of decomposition and access to get them out). In such cases, a carcass is left in place and, where possible, decomposition expedited with the approved means such as explosives or proven chemicals.
- As part of the administration of the proposed action, personnel will monitor compliance of the required permit clauses, conservation measures, and conditions of the grazing permits, with special emphasis being given to conditions relative to grizzly bear protection and management.